

TDMS No. 95011 - 07
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
5-(HYDROXYMETHYL)-2-FURFURAL
CAS Number: 67-47-0
Pathologist: TOFT, J. - Unknown, U.
F1_R2

Date Report Reqsted: 09/01/2006
Time Report Reqsted: 08:20:21
First Dose M/F: 03/06/02 / 03/07/02
Lab: BAT

C Number: C95011B
Lock Date: 11/09/2004
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Dosing Accident			1	1
Moribund Sacrifice	20	9	9	10
Natural Death	8	7	9	4
Survivors				
Terminal Sacrifice	22	34	31	35
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Periesophageal Tissue, Hemorrhage			1 (2%)	
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 (2%)			
Parasite Metazoan	3 (6%)	5 (10%)	3 (6%)	7 (14%)
Epithelium, Ulcer	1 (2%)			
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	4 (8%)	7 (14%)	4 (8%)	7 (14%)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Parasite Metazoan	1 (2%)			
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid	1 (2%)			
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 (2%)	1 (2%)		2 (4%)
Basophilic Focus	25 (50%)	32 (64%)	27 (54%)	34 (68%)
Clear Cell Focus	4 (8%)	6 (12%)	11 (22%)	20 (40%)
Degeneration, Cystic			1 (2%)	
Eosinophilic Focus	1 (2%)		2 (4%)	2 (4%)
Fibrosis	1 (2%)			1 (2%)
Hematopoietic Cell Proliferation	5 (10%)	5 (10%)	3 (6%)	7 (14%)
Hemorrhage	1 (2%)			1 (2%)
Hepatodiaphragmatic Nodule	4 (8%)	6 (12%)	6 (12%)	3 (6%)
Inflammation, Chronic Active	25 (50%)	34 (68%)	30 (60%)	38 (76%)
Mixed Cell Focus	16 (32%)	17 (34%)	16 (32%)	17 (34%)

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
CAS Number: 67-47-0
Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
Time Report Requested: 08:20:21
First Dose M/F: 03/06/02 / 03/07/02
Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Bile Duct, Hyperplasia	49 (98%)	47 (94%)	47 (94%)	48 (96%)
Centrilobular, Hepatocyte, Degeneration	2 (4%)	1 (2%)	5 (10%)	3 (6%)
Hepatocyte, Degeneration, Cystic	8 (16%)	17 (34%)	15 (30%)	10 (20%)
Hepatocyte, Fatty Change	14 (28%)	7 (14%)	7 (14%)	2 (4%)
Hepatocyte, Hyperplasia		1 (2%)	1 (2%)	
Hepatocyte, Necrosis		4 (8%)	2 (4%)	
Hepatocyte, Vacuolization Cytoplasmic	18 (36%)	24 (48%)	16 (32%)	24 (48%)
Mesentery	(9)	(8)	(7)	(6)
Fat, Fibrosis	5 (56%)	6 (75%)	4 (57%)	3 (50%)
Fat, Hemorrhage		1 (13%)		
Fat, Inflammation, Chronic Active	5 (56%)	5 (63%)	2 (29%)	2 (33%)
Fat, Mineralization	2 (22%)	1 (13%)	2 (29%)	1 (17%)
Fat, Necrosis	6 (67%)	6 (75%)	4 (57%)	4 (67%)
Fat, Pigmentation		2 (25%)		1 (17%)
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus		1 (2%)		
Cyst	1 (2%)			
Inflammation, Chronic Active	1 (2%)			
Pigmentation	1 (2%)			
Acinus, Atrophy	23 (46%)	21 (42%)	25 (50%)	23 (46%)
Acinus, Hyperplasia		1 (2%)	3 (6%)	1 (2%)
Duct, Cyst			1 (2%)	
Salivary Glands	(50)	(50)	(49)	(49)
Atrophy, Focal				1 (2%)
Inflammation, Chronic Active			1 (2%)	
Stomach, Forestomach	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	4 (8%)		1 (2%)	
Epithelium, Hyperplasia	2 (4%)	1 (2%)		
Epithelium, Ulcer	3 (6%)		1 (2%)	
Stomach, Glandular	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 (2%)			1 (2%)
Epithelium, Erosion	1 (2%)	2 (4%)	2 (4%)	
Epithelium, Hyperplasia				1 (2%)
Tongue	(0)	(1)	(0)	(0)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	48 (96%)	49 (98%)	49 (98%)	48 (96%)
Mineralization			1 (2%)	1 (2%)
Pigmentation		1 (2%)		

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Atrium, Fibrosis				2 (4%)
Atrium, Thrombosis	5 (10%)	4 (8%)	3 (6%)	2 (4%)
Valve, Thrombosis				1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Accessory Adrenal Cortical Nodule			1 (2%)	1 (2%)
Degeneration, Fatty			1 (2%)	
Hematopoietic Cell Proliferation	9 (18%)	6 (12%)	2 (4%)	9 (18%)
Hyperplasia	20 (40%)	7 (14%)	11 (22%)	18 (36%)
Hypertrophy	1 (2%)	2 (4%)	4 (8%)	2 (4%)
Necrosis		1 (2%)	1 (2%)	
Vacuolization Cytoplasmic	36 (72%)	25 (50%)	25 (50%)	28 (56%)
Capsule, Inflammation, Chronic Active			1 (2%)	
Adrenal Medulla	(50)	(50)	(50)	(50)
Angiectasis				1 (2%)
Fibrosis	2 (4%)			
Hemorrhage		1 (2%)		
Hyperplasia	19 (38%)	26 (52%)	17 (34%)	13 (26%)
Pigmentation	1 (2%)			
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)		2 (4%)	
Parathyroid Gland	(49)	(48)	(48)	(48)
Pituitary Gland	(50)	(50)	(50)	(50)
Pars Distalis, Angiectasis	15 (30%)	16 (32%)	19 (38%)	14 (28%)
Pars Distalis, Cyst	8 (16%)	3 (6%)	3 (6%)	4 (8%)
Pars Distalis, Cyst, Multiple	1 (2%)	1 (2%)	2 (4%)	1 (2%)
Pars Distalis, Hyperplasia	20 (40%)	20 (40%)	18 (36%)	23 (46%)
Pars Distalis, Pigmentation	14 (28%)	18 (36%)	14 (28%)	11 (22%)
Pars Intermedia, Angiectasis		1 (2%)		
Pars Intermedia, Cyst			1 (2%)	
Pars Intermedia, Pigmentation	3 (6%)	2 (4%)		
Thyroid Gland	(50)	(49)	(48)	(48)
Pigmentation	1 (2%)			
Ultimobranchial Cyst	2 (4%)		1 (2%)	1 (2%)
Bilateral, C-cell, Hyperplasia		1 (2%)		
C-cell, Hyperplasia	11 (22%)	16 (33%)	8 (17%)	11 (23%)
Follicle, Cyst		4 (8%)	1 (2%)	3 (6%)
Follicular Cell, Hyperplasia	1 (2%)		1 (2%)	1 (2%)

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
GENERAL BODY SYSTEM				
Peritoneum	(1)	(0)	(0)	(0)
GENITAL SYSTEM				
Coagulating Gland	(1)	(0)	(0)	(4)
Inflammation				1 (25%)
Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm	4 (8%)			2 (4%)
Preputial Gland	(50)	(50)	(50)	(50)
Hyperplasia	4 (8%)	2 (4%)	1 (2%)	1 (2%)
Inflammation, Chronic Active	43 (86%)	46 (92%)	44 (88%)	46 (92%)
Mineralization				1 (2%)
Bilateral, Hyperplasia		1 (2%)		
Duct, Ectasia	3 (6%)	2 (4%)	2 (4%)	2 (4%)
Prostate	(50)	(50)	(50)	(50)
Cyst, Multiple			1 (2%)	
Inflammation, Chronic Active	22 (44%)	27 (54%)	36 (72%)	30 (60%)
Epithelium, Hyperplasia	10 (20%)	13 (26%)	14 (28%)	17 (34%)
Epithelium, Hypertrophy	14 (28%)	14 (28%)	21 (42%)	17 (34%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Mineralization	32 (64%)	34 (68%)	30 (60%)	24 (48%)
Germinal Epithelium, Degeneration	5 (10%)	7 (14%)	8 (16%)	5 (10%)
Interstitial Cell, Hyperplasia	10 (20%)	11 (22%)	10 (20%)	5 (10%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Fibrosis				1 (2%)
Hyperplasia	19 (38%)	20 (40%)	27 (54%)	16 (32%)
Lymph Node	(10)	(6)	(4)	(4)
Deep Cervical, Pigmentation	1 (10%)			
Pancreatic, Hemorrhage		1 (17%)		
Lymph Node, Mesenteric	(50)	(50)	(50)	(49)
Necrosis, Lymphoid		1 (2%)		
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	5 (10%)			2 (4%)

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Necrosis	1 (2%)			
Capsule, Fibrosis			1 (2%)	
Lymphoid Follicle, Atrophy			1 (2%)	
Lymphoid Follicle, Hyperplasia			1 (2%)	
Thymus	(48)	(47)	(49)	(46)
Ectopic Parathyroid Gland			1 (2%)	1 (2%)
Thymocyte, Necrosis		1 (2%)		
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(49)	(50)	(50)
Cyst				2 (4%)
Galactocoele			1 (2%)	
Duct, Dilatation	7 (14%)	15 (31%)	8 (16%)	4 (8%)
Skin	(50)	(49)	(50)	(50)
Cyst Epithelial Inclusion				1 (2%)
Inflammation, Chronic Active			1 (2%)	
Epidermis, Hyperplasia			1 (2%)	
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Hyperostosis		1 (2%)		
Skeletal Muscle	(3)	(1)	(2)	(2)
Lymphatic, Angiectasis				1 (50%)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	1 (2%)	2 (4%)		
Hemorrhage	4 (8%)	2 (4%)	1 (2%)	
Hydrocephalus		1 (2%)		2 (4%)
Cerebellum, Necrosis		1 (2%)		
Spinal Cord	(1)	(1)	(1)	(0)
Hemorrhage		1 (100%)		
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
CAS Number: 67-47-0
Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
Time Report Requested: 08:20:21
First Dose M/F: 03/06/02 / 03/07/02
Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Congestion				1 (2%)
Fibrosis	1 (2%)			
Hemorrhage				1 (2%)
Inflammation, Suppurative				1 (2%)
Inflammation, Chronic Active	22 (44%)	19 (38%)	24 (48%)	30 (60%)
Metaplasia, Osseous	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Metaplasia, Squamous		1 (2%)		
Pigmentation				1 (2%)
Alveolar Epithelium, Hyperplasia	9 (18%)	15 (30%)	13 (26%)	9 (18%)
Alveolar Epithelium, Metaplasia, Squamous	1 (2%)			
Alveolus, Infiltration Cellular, Histiocyte	28 (56%)	30 (60%)	34 (68%)	36 (72%)
Bronchus, Foreign Body				1 (2%)
Bronchus, Hyperplasia				1 (2%)
Perivascular, Infiltration Cellular, Lymphoid	29 (58%)	28 (56%)	28 (56%)	32 (64%)
Nose	(50)	(49)	(48)	(49)
Foreign Body	10 (20%)	14 (29%)	7 (15%)	9 (18%)
Inflammation, Suppurative	3 (6%)	7 (14%)	5 (10%)	9 (18%)
Inflammation, Chronic Active	6 (12%)	9 (18%)	2 (4%)	5 (10%)
Thrombosis	2 (4%)	4 (8%)	6 (13%)	1 (2%)
Glands, Dilatation	1 (2%)	1 (2%)		
Nasolacrimal Duct, Cyst			1 (2%)	
Nasolacrimal Duct, Inflammation, Suppurative	2 (4%)	1 (2%)		
Nasolacrimal Duct, Inflammation, Chronic	3 (6%)	4 (8%)	3 (6%)	1 (2%)
Olfactory Epithelium, Accumulation, Hyaline Droplet	6 (12%)			
Olfactory Epithelium, Cyst		1 (2%)		
Olfactory Epithelium, Degeneration	18 (36%)	22 (45%)	26 (54%)	29 (59%)
Olfactory Epithelium, Metaplasia, Respiratory	2 (4%)	5 (10%)	3 (6%)	11 (22%)
Olfactory Epithelium, Metaplasia, Squamous				1 (2%)
Olfactory Epithelium, Necrosis	1 (2%)			
Respiratory Epithelium, Accumulation, Hyaline Droplet	7 (14%)			
Respiratory Epithelium, Hyperplasia	28 (56%)	24 (49%)	18 (38%)	23 (47%)
Respiratory Epithelium, Metaplasia, Squamous		2 (4%)	1 (2%)	16 (33%)
Respiratory Epithelium, Necrosis	1 (2%)			
Trachea	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				1 (2%)

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
SPECIAL SENSES SYSTEM				
Ear	(0)	(0)	(0)	(2)
Eye	(50)	(50)	(50)	(50)
Lens, Cataract	3 (6%)	1 (2%)		1 (2%)
Retina, Degeneration	3 (6%)	1 (2%)		1 (2%)
Harderian Gland	(49)	(50)	(50)	(50)
Hyperplasia				1 (2%)
Inflammation, Chronic Active	5 (10%)	6 (12%)	3 (6%)	7 (14%)
Zymbal's Gland	(0)	(0)	(0)	(1)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Hydronephrosis				1 (2%)
Infarct		1 (2%)	1 (2%)	
Inflammation, Suppurative				1 (2%)
Mineralization	19 (38%)	30 (60%)	22 (44%)	30 (60%)
Nephropathy	50 (100%)	49 (98%)	45 (90%)	47 (94%)
Thrombosis			1 (2%)	1 (2%)
Bilateral, Infarct		1 (2%)		
Cortex, Cyst	1 (2%)	1 (2%)		
Renal Tubule, Accumulation, Hyaline Droplet		1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Hyperplasia			2 (4%)	
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				1 (2%)

*** END OF MALE ***

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Dosing Accident				2
Moribund Sacrifice	14	7	13	7
Natural Death	5	11	10	11
Survivors				
Natural Death				1
Terminal Sacrifice	31	32	27	29
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Large, Cecum	(50)	(50)	(50)	(49)
Intestine Large, Colon	(50)	(50)	(50)	(49)
Parasite Metazoan	1 (2%)		1 (2%)	4 (8%)
Intestine Large, Rectum	(50)	(49)	(50)	(50)
Diverticulum		1 (2%)		
Parasite Metazoan	3 (6%)	6 (12%)	3 (6%)	3 (6%)
Intestine Small, Ileum	(50)	(50)	(50)	(49)
Parasite Metazoan			1 (2%)	
Intestine Small, Jejunum	(50)	(50)	(50)	(49)
Peyer's Patch, Hyperplasia, Lymphoid		1 (2%)		
Liver	(50)	(50)	(50)	(49)
Angiectasis		1 (2%)	1 (2%)	2 (4%)
Basophilic Focus	44 (88%)	47 (94%)	45 (90%)	42 (86%)
Clear Cell Focus		2 (4%)	2 (4%)	1 (2%)
Eosinophilic Focus			1 (2%)	1 (2%)
Hematopoietic Cell Proliferation	7 (14%)	10 (20%)	8 (16%)	4 (8%)
Hemorrhage			1 (2%)	
Hepatodiaphragmatic Nodule	6 (12%)	8 (16%)	8 (16%)	7 (14%)
Inflammation, Chronic Active	43 (86%)	40 (80%)	41 (82%)	39 (80%)
Mineralization			1 (2%)	
Mixed Cell Focus	9 (18%)	13 (26%)	8 (16%)	8 (16%)
Bile Duct, Hyperplasia	23 (46%)	22 (44%)	29 (58%)	24 (49%)
Centrilobular, Hepatocyte, Degeneration	2 (4%)			2 (4%)
Hepatocyte, Degeneration, Cystic			1 (2%)	1 (2%)
Hepatocyte, Fatty Change	6 (12%)	5 (10%)		2 (4%)

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Hepatocyte, Hyperplasia		1 (2%)		
Hepatocyte, Necrosis				2 (4%)
Hepatocyte, Vacuolization Cytoplasmic	9 (18%)	5 (10%)	2 (4%)	2 (4%)
Mesentery	(7)	(10)	(9)	(9)
Fat, Fibrosis	5 (71%)	8 (80%)	7 (78%)	8 (89%)
Fat, Inflammation, Chronic Active	5 (71%)	7 (70%)	7 (78%)	5 (56%)
Fat, Mineralization	4 (57%)	6 (60%)	3 (33%)	5 (56%)
Fat, Necrosis	7 (100%)	9 (90%)	7 (78%)	9 (100%)
Fat, Pigmentation				3 (33%)
Lymphatic, Angiectasis			1 (11%)	
Pancreas	(50)	(50)	(50)	(49)
Infiltration Cellular, Lymphoid		1 (2%)		
Inflammation, Chronic Active		2 (4%)	1 (2%)	
Acinus, Atrophy	10 (20%)	11 (22%)	5 (10%)	10 (20%)
Acinus, Hyperplasia			1 (2%)	
Duct, Cyst		1 (2%)		3 (6%)
Salivary Glands	(50)	(49)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(49)
Inflammation, Chronic Active	1 (2%)	2 (4%)		3 (6%)
Epithelium, Hyperplasia	2 (4%)			3 (6%)
Epithelium, Ulcer	1 (2%)	2 (4%)		2 (4%)
Stomach, Glandular	(50)	(50)	(50)	(49)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	47 (94%)	49 (98%)	46 (92%)	47 (94%)
Mineralization	1 (2%)			
Atrium, Thrombosis	2 (4%)			1 (2%)
Valve, Inflammation, Suppurative			1 (2%)	
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(49)
Accessory Adrenal Cortical Nodule			1 (2%)	2 (4%)
Hematopoietic Cell Proliferation	7 (14%)	14 (28%)	9 (18%)	7 (14%)
Hyperplasia	12 (24%)	14 (28%)	13 (26%)	4 (8%)
Hypertrophy	5 (10%)	5 (10%)	1 (2%)	3 (6%)
Karyomegaly				1 (2%)
Necrosis	1 (2%)	1 (2%)		

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Pigmentation			1 (2%)	
Vacuolization Cytoplasmic	22 (44%)	25 (50%)	16 (32%)	20 (41%)
Bilateral, Hemorrhage		1 (2%)		
Adrenal Medulla	(50)	(50)	(50)	(49)
Hyperplasia	4 (8%)	3 (6%)	2 (4%)	4 (8%)
Infiltration Cellular, Lymphoid				2 (4%)
Islets, Pancreatic	(50)	(50)	(50)	(49)
Pituitary Gland	(50)	(50)	(50)	(50)
Hemorrhage		1 (2%)		
Pars Distalis, Pars Intermedia, Pigmentation			1 (2%)	1 (2%)
Pars Distalis, Angiectasis	34 (68%)	34 (68%)	29 (58%)	34 (68%)
Pars Distalis, Cyst	7 (14%)	9 (18%)	11 (22%)	7 (14%)
Pars Distalis, Cyst, Multiple	10 (20%)	12 (24%)	14 (28%)	9 (18%)
Pars Distalis, Hyperplasia	20 (40%)	13 (26%)	20 (40%)	20 (40%)
Pars Distalis, Pigmentation	27 (54%)	27 (54%)	27 (54%)	30 (60%)
Pars Distalis, Vacuolization Cytoplasmic	1 (2%)			
Pars Intermedia, Angiectasis				1 (2%)
Pars Intermedia, Cyst	1 (2%)			4 (8%)
Pars Intermedia, Cyst, Multiple	1 (2%)			1 (2%)
Pars Intermedia, Pigmentation	2 (4%)	1 (2%)	2 (4%)	
Rathke's Cleft, Cyst			1 (2%)	
Thyroid Gland	(50)	(50)	(50)	(50)
Ultimobranchial Cyst		1 (2%)		1 (2%)
C-cell, Hyperplasia	14 (28%)	13 (26%)	13 (26%)	13 (26%)
Follicle, Cyst	1 (2%)			1 (2%)
Follicular Cell, Hyperplasia				1 (2%)
GENERAL BODY SYSTEM				
Peritoneum	(0)	(1)	(0)	(0)
Tissue NOS	(0)	(0)	(0)	(1)
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(50)
Hyperplasia	10 (20%)	13 (26%)	7 (14%)	8 (16%)
Inflammation, Chronic Active	12 (24%)	26 (52%)	18 (36%)	10 (20%)
Bilateral, Hyperplasia		1 (2%)	3 (6%)	1 (2%)
Duct, Cyst	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Ovary	(49)	(50)	(50)	(49)

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Atrophy		1 (2%)		
Cyst	11 (22%)	9 (18%)	6 (12%)	5 (10%)
Bilateral, Cyst		1 (2%)		
Uterus	(50)	(50)	(50)	(49)
Hemorrhage	1 (2%)		1 (2%)	
Endometrium, Cyst		2 (4%)	2 (4%)	1 (2%)
Vagina	(0)	(0)	(3)	(0)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	9 (18%)	9 (18%)	9 (18%)	8 (16%)
Hyperplasia, Histiocytic			1 (2%)	
Lymph Node	(1)	(1)	(1)	(4)
Lymph Node, Mesenteric	(50)	(49)	(50)	(49)
Hyperplasia, Lymphoid	1 (2%)			
Spleen	(50)	(50)	(50)	(49)
Accessory Spleen				1 (2%)
Hematopoietic Cell Proliferation	2 (4%)	3 (6%)	6 (12%)	2 (4%)
Lymphoid Follicle, Hyperplasia		1 (2%)		
Thymus	(48)	(47)	(48)	(43)
Ectopic Parathyroid Gland	2 (4%)	6 (13%)	2 (4%)	1 (2%)
Ectopic Thyroid			1 (2%)	
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(49)
Cyst				1 (2%)
Galactocoele	17 (34%)	17 (34%)	21 (42%)	17 (35%)
Hyperplasia, Cystic		1 (2%)	1 (2%)	
Duct, Dilatation	37 (74%)	40 (80%)	35 (70%)	38 (78%)
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 (2%)			1 (2%)
Subcutaneous Tissue, Inflammation, Chronic				1 (2%)
Active				
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteopetrosis	1 (2%)			

a - Number of animals examined microscopically at site and number of animals with lesion

TDMS No. 95011 - 07
 Test Type: CHRONIC
 Route: GAVAGE
 Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
 5-(HYDROXYMETHYL)-2-FURFURAL
 CAS Number: 67-47-0
 Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
 Time Report Requested: 08:20:21
 First Dose M/F: 03/06/02 / 03/07/02
 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Skeletal Muscle	(1)	(0)	(0)	(0)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	2 (4%)	1 (2%)	2 (4%)	4 (8%)
Hemorrhage	1 (2%)			
Hydrocephalus	2 (4%)	3 (6%)	1 (2%)	1 (2%)
Inflammation, Chronic Active	1 (2%)			
Necrosis	1 (2%)			
Spinal Cord	(0)	(0)	(1)	(0)
Hemorrhage			1 (100%)	
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Cyst				1 (2%)
Fibrosis				3 (6%)
Hemorrhage				1 (2%)
Inflammation, Suppurative		1 (2%)		
Inflammation, Chronic Active	31 (62%)	30 (60%)	28 (56%)	37 (74%)
Metaplasia, Osseous	2 (4%)	1 (2%)	1 (2%)	
Pigmentation	3 (6%)	3 (6%)	5 (10%)	2 (4%)
Alveolar Epithelium, Hyperplasia	11 (22%)	10 (20%)	10 (20%)	8 (16%)
Alveolus, Infiltration Cellular, Histiocyte	45 (90%)	46 (92%)	46 (92%)	37 (74%)
Bronchus, Hyperplasia				3 (6%)
Bronchus, Metaplasia, Squamous				3 (6%)
Perivascular, Infiltration Cellular, Lymphoid	40 (80%)	45 (90%)	43 (86%)	42 (84%)
Nose	(50)	(49)	(49)	(49)
Foreign Body	3 (6%)	2 (4%)	1 (2%)	8 (16%)
Inflammation, Suppurative				8 (16%)
Inflammation, Chronic Active	4 (8%)	3 (6%)	2 (4%)	7 (14%)
Thrombosis				1 (2%)
Glands, Dilatation		1 (2%)	1 (2%)	
Nasolacrimal Duct, Inflammation, Suppurative	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Nasolacrimal Duct, Inflammation, Chronic	2 (4%)	2 (4%)	3 (6%)	12 (24%)
Olfactory Epithelium, Accumulation, Hyaline Droplet	34 (68%)	15 (31%)	22 (45%)	
Olfactory Epithelium, Degeneration	21 (42%)	35 (71%)	36 (73%)	28 (57%)

TDMS No. 95011 - 07
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
5-(HYDROXYMETHYL)-2-FURFURAL
CAS Number: 67-47-0
Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
Time Report Requested: 08:20:21
First Dose M/F: 03/06/02 / 03/07/02
Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Olfactory Epithelium, Metaplasia, Respiratory	1 (2%)	1 (2%)		11 (22%)
Olfactory Epithelium, Metaplasia, Squamous				2 (4%)
Olfactory Epithelium, Necrosis			1 (2%)	
Respiratory Epithelium, Accumulation, Hyaline Droplet	9 (18%)	3 (6%)	4 (8%)	
Respiratory Epithelium, Hyperplasia	18 (36%)	13 (27%)	21 (43%)	20 (41%)
Respiratory Epithelium, Metaplasia, Squamous	1 (2%)	1 (2%)		24 (49%)
Respiratory Epithelium, Necrosis		1 (2%)		2 (4%)
SPECIAL SENSES SYSTEM				
Ear	(1)	(1)	(0)	(1)
Eye	(50)	(50)	(50)	(50)
Atrophy		1 (2%)		
Lens, Cataract	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Retina, Degeneration	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Harderian Gland	(50)	(50)	(49)	(50)
Hyperplasia		1 (2%)		
Inflammation, Chronic Active	12 (24%)	12 (24%)	18 (37%)	15 (30%)
Zymbal's Gland	(0)	(0)	(1)	(0)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(49)
Hydronephrosis	1 (2%)	1 (2%)		
Infarct	1 (2%)		1 (2%)	
Inflammation, Suppurative			1 (2%)	
Inflammation, Chronic Active		1 (2%)		1 (2%)
Mineralization	28 (56%)	17 (34%)	19 (38%)	25 (51%)
Nephropathy	43 (86%)	42 (84%)	39 (78%)	35 (71%)
Cortex, Pelvis, Cyst, Multiple	1 (2%)			
Cortex, Cyst	2 (4%)	1 (2%)		1 (2%)
Pelvis, Transitional Epithelium, Hyperplasia	1 (2%)			
Pelvis, Inflammation, Chronic Active	1 (2%)			
Urinary Bladder	(50)	(50)	(50)	(50)

TDMS No. 95011 - 07
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
5-(HYDROXYMETHYL)-2-FURFURAL
CAS Number: 67-47-0
Pathologist: TOFT, J. - Unknown, U.

Date Report Requested: 09/01/2006
Time Report Requested: 08:20:21
First Dose M/F: 03/06/02 / 03/07/02
Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
-------------------------	---------	-----------	-----------	-----------

*** END OF REPORT ***